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BULLETIN
OF THE
TORREY BOTANICAL CLUB.

Vol. XVII.] New York, February 5, 1890. [No. 2.

Plant Notes from Tadousac and Temiscouata County, Canada.

By John I. Northrop and Alice B. Northrop.

The little village of Tadousac is beautifully situated at the junction of the Saguenay and the St. Lawrence. The latter river here forms quite a deep bay, on the curving shores of which stands the main part of the village, while on the jutting rocky point that separates the bay from the mouth of the Saguenay, are the picturesque cottages of the French fishermen and half-breeds. Just south of the village the banks become very steep and here, far above the present beach, are two, and in some places, three very fine terraces, stretching around the point of the bay and for some distance down the St. Lawrence. Back of all rise the lofty hills of the Saguenay. Our first walk was out on the headland at the mouth of the latter river,and here, at the level of the sea, we found many of the alpine plants of Mt. Washington; among these were *Potentilla tridentata*, *Euphrasia officinalis* and *Vaccinium Vitis-Idæa.* Great mats of *Empetrum nigrum* grew on the rocky banks and beautiful Campanulas nodded from the crevices. We were interested in observing that here *Campanula rotundifolia* bore only a single flower at the summit, and resembled but slightly the large and many-flowered plants, two feet in height, that we had collected in Crawford Notch, and also very different apparently from the little blue bells, three inches high, that grow near the Lake of the Clouds on Mt. Washington, and bear but a single *erect* flower, of a very dark blue color.

We found much the same difference in the forms of *Euphrasia officinalis.* We had first collected it a few weeks previous, near Oakes' Gulf on Mt. Washington, and there, though mature, it was so tiny that in order to find it we had literally to get down on our hands and knees, and go over the ground inch by inch. At Tadousac we collected the usual small bushy Canadian form and a week or two later, at Lake Temiscouata, found some specimens about 8 inches high. Besides this alpine flora, there were many maritime plants. *Plantago maritima* and *Triglochin maritimum* were common, *Tissa salina* grew on the tide flats, and *Lathyrus maritimus* over the rocks on the beach. But most beautiful of all were the great spreading clusters of *Mertensia maritima*, with its graceful trailing branches, glaucous foliage, and showy blue flowers.

Higher up on the rocks were great patches of *Kalmia angustifolia*, making masses of pink bloom; with these grew *Ledum latifolium* and *Cassandra calyculata*, both in fruit, while shading these tangled thickets, were *Pinus Banksiana*, the white spruce, and the black spruce. Trailing over the rocks we found *Juniperus Sabina*, var. *procumbens*, in fruit, and the prostrate variety *alpina* of *Juniperus communis*.

The yellow blossoms, and curious inflated pods of *Rhinanthus Crista-galli* were common near the shore, and in the wet grassy spots *Microstylis unifolia* grew plentifully. Along the Saguenay we collected *Ranunculus Cymbalaria*, and in the crevices of the rock *Aspidium fragrans* was found growing in large tufts, still holding last years leaves, and *Corallorhiza innata*. Here we also collected *Comandra livida* and *Goodyera repens*.

On the border of a small pond near Tadousac, *Polygonum amphibium* was found and in the bogs near the shore we saw *Eriophorum gracile*, and with it the purple-flowered *Potentilla palustris;* also *Calla palustris*, but the flowers had already gone and we could only get the fruit. Although it was the last week in July, we noticed that the little birches on the hillsides near Tadousac had begun to turn yellow, showing that the brief northern summer was already on the wane.

A sail of three hours brought us to Riviere du Loup, and the next morning we botanized along the banks of the rapid flowing stream that gives the town its name. In one place it makes a plunge of about 40 feet over the edges of the dark slaty rock which forms its bed, and here under the hemlocks we found *Moneses uniflora*, the bright blue berries of *Clintonia*, *Coptis trifolia* and *Halenia deflexa*.

Our train left Riviere du Loup about noon, and we were soon speeding towards Lake Temiscouata, some fifty miles to the southeast. At first poplars, birches and spruces were plenty, but as we neared the lake we passed through great swamps of *Thuja* *occidentalis*, some of the trees being the largest we had ever seen. In the cleared places were large patches of *Cnicus arvensis*, *Epilobium spicatum* and great masses of the gorgeous yellow heads of *Sonchus arvensis*, while in places *Vicia Cracca* covered the grass and low shrubs with a mantle of blue. After a ride of nearly three hours, we alighted at our destination, the little village of Notre Dame du Lac, prettily situated on the curving shore of Lake Temiscouata.

Two lists of plants from this region have already appeared in the BULLETIN, the first by John I. Northrop, in November, 1887, the second by Henry M. Ami, in May, 1888.

On my previous visit, in one place near the shore, I collected an exotic labiate, which was not determined as the specimen was in fruit, but this year we found the same species, now evidently well established and holding its own in a dense growth of *Galeopsis Tetrahit* and *Amarantus*. It has curious one-sided spikes of blue flowers, and a peculiar lemon-like odor. We sent some specimens to Dr. Britton, who wrote in reply that it was *Elsholtzia cristata*, a native of Siberia, and belonged near our genus *Collinsonia*. We found it growing in a clearing near a mill, and there is no doubt but that it has been introduced. Still, there are no records of its ever being cultivated, and how it reached this out-of-the-way spot is a mystery.

Near by on the banks of a brook, *Listera convallarioides* grew abundantly and on the hillside above we found a few specimens of *Pyrola chlorantha*. Great beds of *Cornus Canadensis* grew here, as almost everywhere in Canada, and we noted that here, as elsewhere, we could not find a *single four-leaved* plant that bore a flower. We had been struck with this fact while botanizing in the White Mountains, and had made it a special point of observation all summer, but out of the hundreds of plants which we examined not one exception did we find to this rule.

One day we took our canoe and paddled some three miles down the opposite shore of the lake and here, growing among the moss along a little brook, we found the rare *Selaginella spinosa*, looking very much like a delicate *Lycopodium*. Farther up the lake on the way to Mount Wissick we found a number of plants of *Equisetum littorale*. The specimens have since been carefully examined and compared with those so named by Dr. Morong and they are undoubtedly the same species. On our way to Mount Wissick we passed over a shallow portion of the lake and a better place to collect water plants could not readily be found. The bottom was in some places gravelly and in others of sandy clay. The water was beautifully clear, but two or three feet in depth. We found here five *Potamogetons: P. pectinatus*, *P. gramineus*, *P. amplifolius*, *P. natans and P. perfoliatus*, the delicate *Ranunculus aquatilis*, var. *trichophyllos*, and two species of *Chara.* Here and there the spikes of the great Bulrush, *Scirpus lacustris*, rose six or seven feet above the surface of the water.

Most beautiful of all were the *Myriophyllums;* one of these, *verticillatum* grew near our camping place in great masses and we could look down into the clear water and trace the long, feathery unbranched stems until they reached the sand, some seven or eight feet below.

Another species, more slender and growing in much shallower water, we have since determined as *Myriophyllum alterniflorum.* Attention has been called to this interesting species by Dr. Morong in a previous number of the BULLETIN, (xiv. 51.) where he states that it has been found in Lake Memphremagog, Canada, by Mr. J. R. Churchill, but previously had been collected no nearer to us than Greenland.

Well pleased with our morning's spoils, we paddled on a mile or so further, until we found a good camping place, when we disembarked and soon started for the top of "la grosse montagne."

Our trail led up through the usual growth of balsam, white spruce, and *Betula papyrifera*; here and there the ledges were luxuriously carpeted with *Cladonia rangeriferina.* Higher up we found dozens of specimens of *Habenaria Hookeriana*, and even more abundant was *Corallorhiza multiflora.* We also found some few spikes of *C. innata.* About 550 feet above the lake we found some plants of *Epigœa repens* (the first we had seen in Canada) surrounded by *Vaccinium Pennsylvanicum*, *Kalmia angustifolia* and *Ledum latifolium*, and shaded by black and white spruces. Among the crannies of the upper ledges we found *Woodsia Ilvensis*, *W. hyperborea*, *Pellœa gracilis* and *Aspidium fragrans.*

The summit was shaded by very fine specimens of the red pine, *Pinus resinosa.* The next day we worked up our plants, collected some fossils from the ledges at the foot of the mountain, and later on in the afternoon started back for Notre Dame du Lac. The few remaining days we spent there were devoted to grasses and sedges—there was not a very great variety of either, however, and their names will be found in the appended list.

The following list contains the plants collected that have not been mentioned in the former lists. Unless otherwise stated the locality is in the vicinity of Notre Dame du Lac.

Ranunculus reptans,
Coptis trifolia.
Nymphæa advena.
Nasturtium palustre.
Silene noctiflora.
Hypericum ellipticum.
Trifolium hybridum.
Astragalus oroboides,
  var. *Americanus.*
Amelanchier Canadensis,
  var. *rotundifolia.*
Chrysosplenium Americanum.
Ribes prostratum.
Myriophyllum verticillatum.
M. alterniflorum.
Osmorrhiza brevistylis.
Heracleum lanatum.
Carum Carui.
Galium asprellum.
Erigeron Philadelphicum.
Gnaphalium uliginosum.
Lobelia Dortmanna.
Epigæa repens, Mt. Wissick.
Pyrola elliptica.
P. rotundifolia.
P. chlorantha.
Hypopitys Monotropa.
Fraxinus sambucifolia.
Veronica serpyllifolia.
V. scutellata.
Verbascum Thapsus.
Mentha sativa.
Elscholtzia cristata.
Apocynum androsæmifolium,
Chenopodium capitatum.
Fagus ferruginea,
Listera convallariodes.
Microstylis unifolia.
Corallorhiza innata.
Goodyera repens.
Habenaria orbiculata.
Trillium erectum.
Juncus nodosus.
J. tenuis.
J. bufonius.
Potamogeton amplifolius.
P. gramineus.
P. perfoliatus.
P. pectinatus.
Carex intumescens.
Carex retrorsa.
C. stipata.
C. tentaculata.
Scirpus atrovirens.
Eriophorum cyperinum.
Dulichium spathaceum.
Eleocharis palustris.
E. ovata.
Phleum pratense.
Agrostis alba.
A. hiemalis,
Deschampsia cæspitosa.
Poa serotina.
Bromus ciliatus.
Agropyrum repens.
Taxus baccata var. *Canadensis.*
Abies Mariana.
Equisetum arvense,
E. limosum.
E. littorale.
E. pratense.
E. scirpoides,

Polypodium vulgare.
Pellæa gracilis.
Aspidium fragrans.
Woodsia Ilvensis. Mt. Wissick.
W. hyperborea, Mt. Wissick.
Botrychium Virginicum, var. *gracile*, Mt. Wissick.
Lycopodium annotinum.
L. lucidulum.
Selaginella spinosa, Lake Temiscouata.

Some Further Notes on the Flora of the Rangeley Lakes.

I have been especially interested in Mr. Johnson's notes on the flora of the Rangeley Lake region published in the October number of the BULLETIN, because some years ago I spent the month of September in one of the camps on Lake Molechunkamunk,—the same lake on which his camp was placed. Our observations were made therefore in much the same region, but at different seasons of the year, so perhaps on this account a few notes of the plants I observed may be a fitting supplement to his statements.

I was too late for grasses, sedges, and orchids, and on my list therefore I find few species, if any, noted. For some reason or other the ferns seem to have been neglected in my collections, perhaps because not abundant, as Mr. Johnson suggests. I find six species of Lycopodium, however, fully as many as could be expected.

In addition to the Ranunculaceæ mentioned I may name *Clematis Virginiana; Thalictrum polygamum; Coptis trifolia; Actæa spicata* var. *rubra*, and *A. alba.* The three species last named were not uncommon in the deep woods.

Two species belonging to the Scropulariaceæ—*Chelone glabra* and *Veronica scutellata*—and four indigenous species of Labiatæ —*Mentha Canadensis*, *Lycopus Virginicus*, *Scutellaria lateriflora*, and *Brunella vulgaris*—were all I found belonging to these families. Thoreau, if I remember rightly, speaks of the monkey-flower (*Mimulus ringens*) as abundant throughout this region, but I saw no trace of it. These two families therefore seem poorly represented, as Mr. Johnson states. Like him, I found no indigenous species of Leguminosæ. I found the Liliaceæ, the Polygonaceæ, the Rosaceæ, the Ericaceæ and the Compositæ all fairly represented for a woodland region. Of the Liliaceæ, *Trillium erectum* and *T. erythrocarpum ;* the two species of *Streptopus ; Clintonia borealis*, were all common. *Lilium Cana-*